SUPERFUND Fact Sheet

WESTERN PROCESSING SUPERFUND SITE
Kent, Washington

EPA U S ENVIRONMENTAL PROTECTION AGENCY REGION 10 March 2000

High-Tech Western Processing Cleanup Winding Down

On March 15, 2000, the Western Processing Trust will hold an open house to celebrate the achievement of a significant milestone toward the final cleanup of the Western Processing Superfund site. After 15 years of cleanup work, active work is completed, and groundwater pollutant levels have been reduced by 95 percent.

Background

The Western Processing company, a chemical waste processing and recycling facility, operated from 1961 to 1983 on a 13-acre site 20 miles south of Seattle, in a commercial area of Kent. Some of the Pacific Northwest's largest industries had contracts with Western Processing to handle a wide variety of chemicals and waste materials.

In 1983, the Environmental Protection Agency (EPA) ordered the company to stop operations and placed Western Processing on the National Priorities List (NPL), a list of the most contaminated sites under EPA's Superfund program. Under the Superfund program, investigation of the contamination at the site was required. The Superfund program also required the cleanup of contaminants (such as metals, polychlorinated biphenyls [PCBs], phenols, and volatile organic compounds) from soil and water found during the site investigation.

Cleanup History

In 1984, cleanup activities began with the removal of approximately 4,700 tons (9.5 million pounds) of wastes from ponds, drums, and tanks on the site's surface. In 1987, the second phase of the cleanup was begun under the guidance of the EPA and the Washington Department of Ecology (WDOE). The work was managed and payed for by the Western Processing Trust. More than 25,000 cubic yards of contaminated soils and sludges were removed from the site subsurface and sent to a permitted landfill in Arlington, Oregon. An additional 10,000 cubic yards of soil from nearby properties were also shipped to Arlington and the excavated areas were covered with clean fill.

Western Processing Site: Looking north at detention basin

In 1988, A 40-foot deep vertical barrier wall ("slurry wall") was installed around the site. The wall, together with a groundwater extraction system, helped prevent contaminants from spreading from the site into nearby groundwater. A groundwater treatment system was also built on-site at this time to remove contaminants (metals, semivolatile organic compounds, and volatile organic compounds) from the groundwater. This "pump and treat" system

operated from 1988 until 1997. During that period, approximately 990 million gallons of water were treated and 100,000 pounds of contaminants removed.

In 1988, 140 pounds of contaminants were being removed from the groundwater each day. By 1997, less than 10 pounds were being removed. The concentration of dichloroethene in the groundwater decreased from more than 2,000 parts per billion (ppb) to less than 100 ppb by early 1996, a 95 percent reduction in contaminant levels.

In 1993, contaminated sediments were dredged from Mill Creek, clean gravel was placed on the bed, and improvements were made to stabilize the creek banks and enhance fish habitat in the creek.

The Site Today- Reductions in Pollution Levels Accomplished

New Treatment System and Slurry Wall Installed

In 1996, the EPA and WDOE approved a request from the Trust to apply an alternative cleanup strategy designed to be more cost effective, yet equally or more protective of the environment. The old extraction system was replaced with a more modern and efficient set of extraction wells and a new automated computer-controlled treatment facility was built. Both systems were tested and fully operating in 1997. A slurry wall was also built to isolate the "clean" northern portion of the site from the contaminated southern area. Workers dug up 5761 cubic yards (8983 tons) of the remaining most contaminated soils from the southern portion of the site and disposed of it off-site.

Cap Over the Site Reduces New Groundwater Contamination

As part of the cleanup, a multi-layered cap was placed over the entire 13-acre southern portion of the site. Construction began in 1998 and was completed in 1999. This cap was designed to minimize the amount of rain water seeping into the contaminated soil. The cap includes a geosynthetic clay layer, impermeable geomembrane, geonet and geotextile composite drainage layer, biotic barrier layers, geotextile filter, soil, and vegetated topsoil. These improvements have resulted in a reduction in groundwater extraction and treatment at the site from an average 225 gallons per minute (GPM) to the current level of 60 GPM.

Operating Costs Reduced by 85 Percent

Through 1996, operating costs averaged approximately $5,000,000 per year. Following implementation of the revised cleanup strategy in 1999, operating costs are expected to be less than $800,000 per year.

Negotiations and technical reviews are underway which would allow the Trust to use monitored natural recovery as the remedy of choice for continued cleanup of a portion of the contaminated groundwater. In addition, a study is underway to evaluate release of the remainder of the treated groundwater directly to Mill Creek, which is expected to increase water flow and provide more oxygenated water to enhance fish habitat. These improvements should further reduce annual operating costs with no loss of protection to the environment. The EPA and Department of Ecology have been able to reduce government oversight and meeting frequency with the Trust from weekly to quarterly, and expect further reductions in oversight costs over the next 30 years as the site is operated and maintained under approved plans.

EPA, Ecology and the Trust celebrate the conclusion of the active phase of work at the Western Processing Superfund site, and the transition to a routine operational mode. The work accomplished demonstrates the successful partnership of government and private industry in helping to protect the environment and improve the quality of life for the people of the Puget Sound area.

Who Can I Call For More Information?

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You may also call our toll free number:
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To ensure effective communication with everyone, additional services can be made available to persons with disabilities by contacting one of the numbers above.

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